

IN THE CLAIMS

Please amend the claims as follows:

Claims 1-42 (Cancelled):

Claim 43 (Currently Amended): A method for detection of an analyte a in a fluid sample, comprising:

1) saturating a solid support comprising, on at least part of its surface, at least one trifunctional reagent (tripod Y) comprising the following three functional poles:

i) a luminescent group (L),

ii) a molecule (B) selected from the group consisting of the analyte a, an analog of the analyte a, and a fragment of the analyte a, which noncovalently and reversibly binds a receptor specific for the analyte a; and

iii) a function that provides attachment of the trifunctional reagent to the surface of the solid support,

with the receptor for the analyte a, wherein the receptor is labeled with a compound (Q) (receptor-Q) that quenches the luminescence of the group L, thereby forming a complex C between the molecule (B) and the receptor-Q;

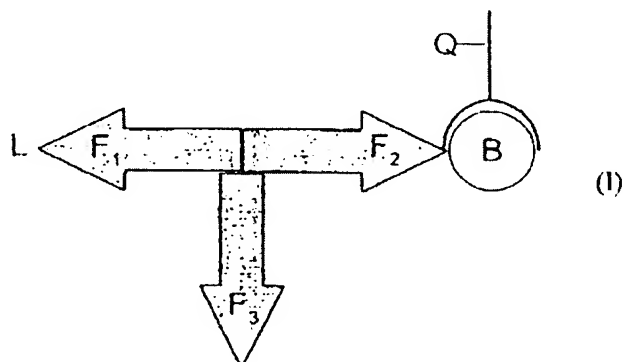
2) bringing the solid support obtained in 1) into contact with a fluid sample that may comprise the analyte a to be detected;

3) measuring the intensity of the signal emitted by the group L, which is proportional to the amount of analyte a present in the fluid sample; and

4) regenerating the solid support by bringing the solid support into contact with the receptor-Q,

wherein 3) and 4) are carried out continuously,

the complex C formed at the end of the saturation in 1) is selected from the group consisting of complexes of formula (I) below:



wherein:

- the arrows represent the structure of the backbone of the tripod Y, which is a linker arm which is a peptide, nucleotide or glucoside chain or a saturated or unsaturated, linear or branched hydrocarbon-based chain; the chains being optionally substituted, interrupted and/or ended with one or more hetero atoms selected from the group consisting of N, O, and S, and/or with one or more amino acids, and comprising three reactive chemical functions F_1 , F_2 and F_3 ;

- L represents the luminescent group covalently bonded to the tripod Y by the reactive chemical function F_1 ;

- B represents the analyte a, a structural analog of the analyte a or a fragment of the analyte a to which the receptor specific for the analyte a is noncovalently and reversibly attached,

wherein the receptor is labeled with the compound Q; and the molecule (B) is covalently bonded to the tripod Y by the reactive chemical function F_2 ;

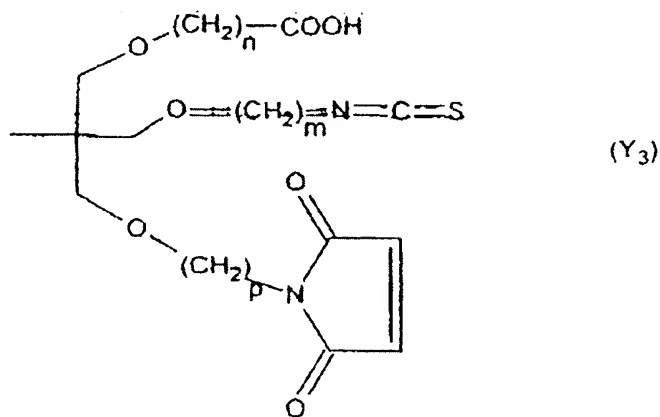
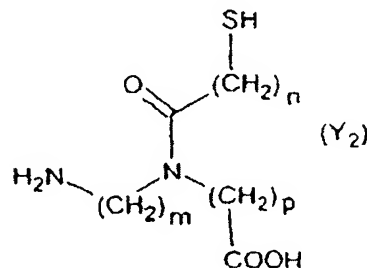
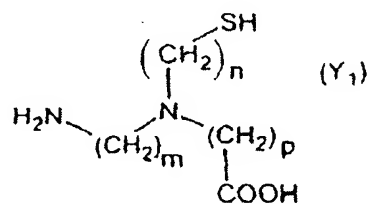
- Q represents the compound that quenches the luminescence of the group L; and

- F₃ represents a reactive chemical function through which the tripod Y is attached to the surface of the solid support,

and

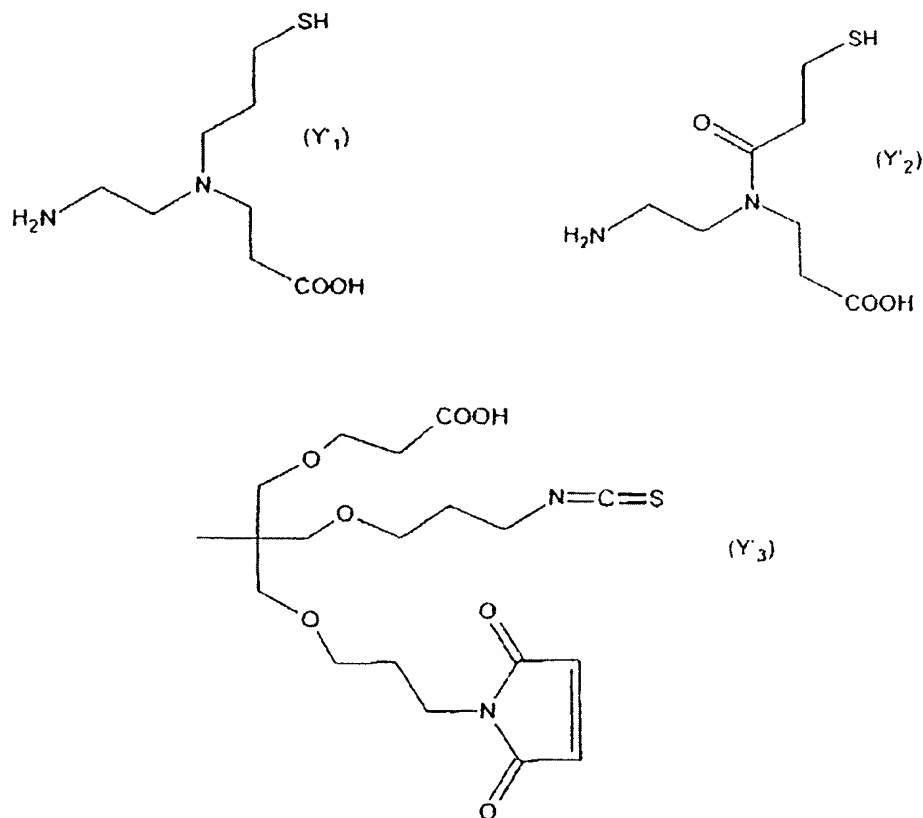
~~The method as claimed claim 35,~~ wherein the complexes of the formula (I) are selected wherein:

- i) (B) is selected from the group consisting of peptides, proteins, oligonucleotides, sugars and peptide nucleic acids,
- ii) L is fluorescein, and
- iii) the backbone of the tripod Y is selected from the group consisting of the structures Y₁ to Y₃ below:



wherein n, m and p, which may be identical or different, are integers between 1 and 20 inclusive.

Claim 44 (Previously Presented): The method as claimed in claim 43, wherein structures Y_1 to Y_3 are selected from the group consisting of compounds of formulae (Y'_1) to (Y'_3) below:



Claim 45 (Cancelled)

Claim 46 (Currently Amended): A method for continuous heterogeneous-phase detection of an analyte a in a fluid sample, comprising detecting the analyte a in a fluid sample with at least one complex C of formula (I) according to claim 43.

Claims 47-54 (Cancelled)

Claim 55 (New): The method as claimed in claim 43, wherein several types of tripods Y that differ from one another through the nature of the molecule (B) that they comprise are attached to distinct and known zones of the solid support.

Claim 56 (New): The method as claimed in claim 43, wherein the solid support is in the form of a tube, a capillary, a plate or a bead.

Claim 57 (New): The method as claimed in claim 43, wherein the solid support is in the form of a tube, a capillary, a plate or a bead.

Claim 58 (New): The method as claimed in claim 43, wherein the fluid sample is water, a liquid biological medium, or a liquid medium comprising dissolved gaseous molecules or molecules originating from solid samples.

Claim 59 (New): The method as claimed in claim 43, wherein the intensity of the signal emitted in 3) is determined by a luminescence detector.

Claim 60 (New): The method as claimed in claim 43, wherein the functions F_1 , F_2 and F_3 , independently of one another, provide:

i) either a direct linkage via a corresponding chemical function present on the luminescent compound, the molecule (B) or the solid phase; or

ii) an indirect linkage, wherein the linkage is carried out by coupling, to at least one of the functions F_1 , F_2 and/or F_3 , a molecule M_1 forming a complex with a molecule M_2 attached beforehand to at least part of the surface of the solid phase, to the molecule (B) and/or to the luminescent group.

Claim 61 (New): The method as claimed in claim 43, wherein the functions F_1 , F_2 and F_3 , which may be identical or different, are selected from the group consisting of: thiols; amines; alcohols; acid functions; esters; isothiocyanates; isocyanates; acylazides; sulfonyl chlorides; aldehydes; glyoxals; epoxides; oxiranes; carbonates; imidoesters; carbodiimides; maleimides; nitriles; aziridines; acryloyl; halogenated derivatives; disulfide groups; phosphorus-containing groups; diazo; carbonyldiimidazole; hydrazides; arylazides; hydrazines; diazirines; magnesium compounds; lithium compounds; cuprates; zinc compounds and unsaturated systems.

Claim 62 (New): The method as claimed in claim 43, wherein the functions F_1 , F_2 and F_3 are selected from the group consisting of amine functions of formulae $R-NH_2$, $R-NH-$, $(R)_3-N$, $R-NH-OR$ and NH_2-OR ; alcohol functions $R-OH$; and halogenated groups of formula $R-X$ with X representing a halogen atom; wherein R represents an alkyl, aryl, vinyl or allyl radical.

Claim 63 (New): The method as claimed in claim 43, wherein the receptor exhibits a greater affinity for the analyte a than for the molecule (B).

Claim 64 (New): The method as claimed in claim 43, wherein the quenching compound (Q) is selected from the group consisting of rhodamine and its derivatives; fluorescein and its derivatives; diaminidophenyl indo (DAPI); acridine; fluorescent dyes with reactive amines; the fluorescent dyes sold under the brand names Bodipy®; the dyes Cascade Blue, Cy2, Cy3, Cy3.5, Cy5, Cy5.5 and Cy7, Dabcyl® and Edans®; eosin; erythrosine; 6-Fam and Texas Red, and nonfluorescent molecules.